

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Basent Formation Queen County Lea
Initial _____ Annual _____ Special x Date of Test 6-25-56/6-29-56
Company Charm Oil Company Lease Superior State Well No. 1
Unit K Sec. 12 Twp. 21S Rge. 35E Purchaser EPNG
Casing 7 Wt. 20 I.D. 6.456 Set at 3700 Perf. 3550 To 3600
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3800 Perf. _____ To _____
Gas Pay: From 3550 To 3600 L 3550 xG .670 -GL 2379 Bar.Press. 13.2
Producing Thru: Casing x Tubing _____ Type Well G. O. Dual
Date of Completion: 10-17-52 Packer 3610-3615 Reservoir Temp. 110°F

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps _____

| No. | Flow Data | | | | | Tubing Data | | Casing Data | | Duration of Flow Hr. |
|-----|----------------------|------------------------|-------------|-------------|-----------|-------------|-----------|-------------|-----------|----------------------|
| | (Prover) (Line) Size | (Choke) (Orifice) Size | Press. psig | Diff. h_w | Temp. °F. | Press. psig | Temp. °F. | Press. psig | Temp. °F. | |
| SI | | | | | | | | | | |
| 1. | 1/4 | 1.500 | 598 | 2.92 | 96 | | | 908 | | 72 |
| 2. | 1/4 | 1.500 | 612 | 4.32 | 88 | | | 897 | | 24 |
| 3. | 1/4 | 1.500 | 618 | 5.82 | 84 | | | 888 | | 24 |
| 4. | 1/4 | 1.500 | 625 | 8.4 | 80 | | | 860 | | 24 |
| 5. | | | | | | | | 821 | | 24 |

Orifice plate too small to get 30% draw down.

FLOW CALCULATIONS

| No. | Coefficient (24-Hour) F_L | $\sqrt{h_w p_f}$ | Pressure psia | Flow Temp. Factor F_t | Gravity Factor F_g | Compress. Factor F_{pv} | Rate of Flow Q-MCFPD @ 15.025 psia |
|-----|-----------------------------|------------------|---------------|-------------------------|----------------------|---------------------------|------------------------------------|
| 1. | 13.99 | 71.68 | | 9671 | 9463 | 1.054 | 968 |
| 2. | 13.99 | 107.5 | | 9741 | 9463 | 1.061 | 1471 |
| 3. | 13.99 | 145.7 | | 9777 | 9463 | 1.062 | 2003 |
| 4. | 13.99 | 202.0 | | 9813 | 9463 | 1.062 | 2787 |
| 5. | | | | | | | |

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
 F_c .707 ($1-e^{-S}$) .151

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
 P_c 921 P_c^2 848

| No. | P_w P_t (psia) | P_t^2 | $F_c Q$ | $(F_c Q)^2$ | $(F_c Q)^2 (1-e^{-S})$ | P_w^2 | $P_c^2 - P_w^2$ | Cal. P_w | P_w / P_c |
|-----|-----------------------|---------|---------|-------------|------------------------|---------|-----------------|------------|-------------|
| 1. | 910 | 828 | .684 | .468 | .07 | 828.07 | 19.93 | | |
| 2. | 901 | 812 | 1.040 | 1.082 | .16 | 812.16 | 35.84 | | |
| 3. | 873 | 762 | 1.416 | 2.005 | .30 | 762.30 | 85.70 | | |
| 4. | 834 | 696 | 1.970 | 3.881 | .58 | 696.59 | 151.41 | | |
| 5. | | | | | | | | | 90.5 |

Absolute Potential: 6500 MCFPD; n .511

COMPANY Charm Oil Company
ADDRESS 302 Carper Building, Artesia, New Mexico
AGENT and TITLE Vilas P. Sheldon
WITNESSED _____
COMPANY _____

REMARKS

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

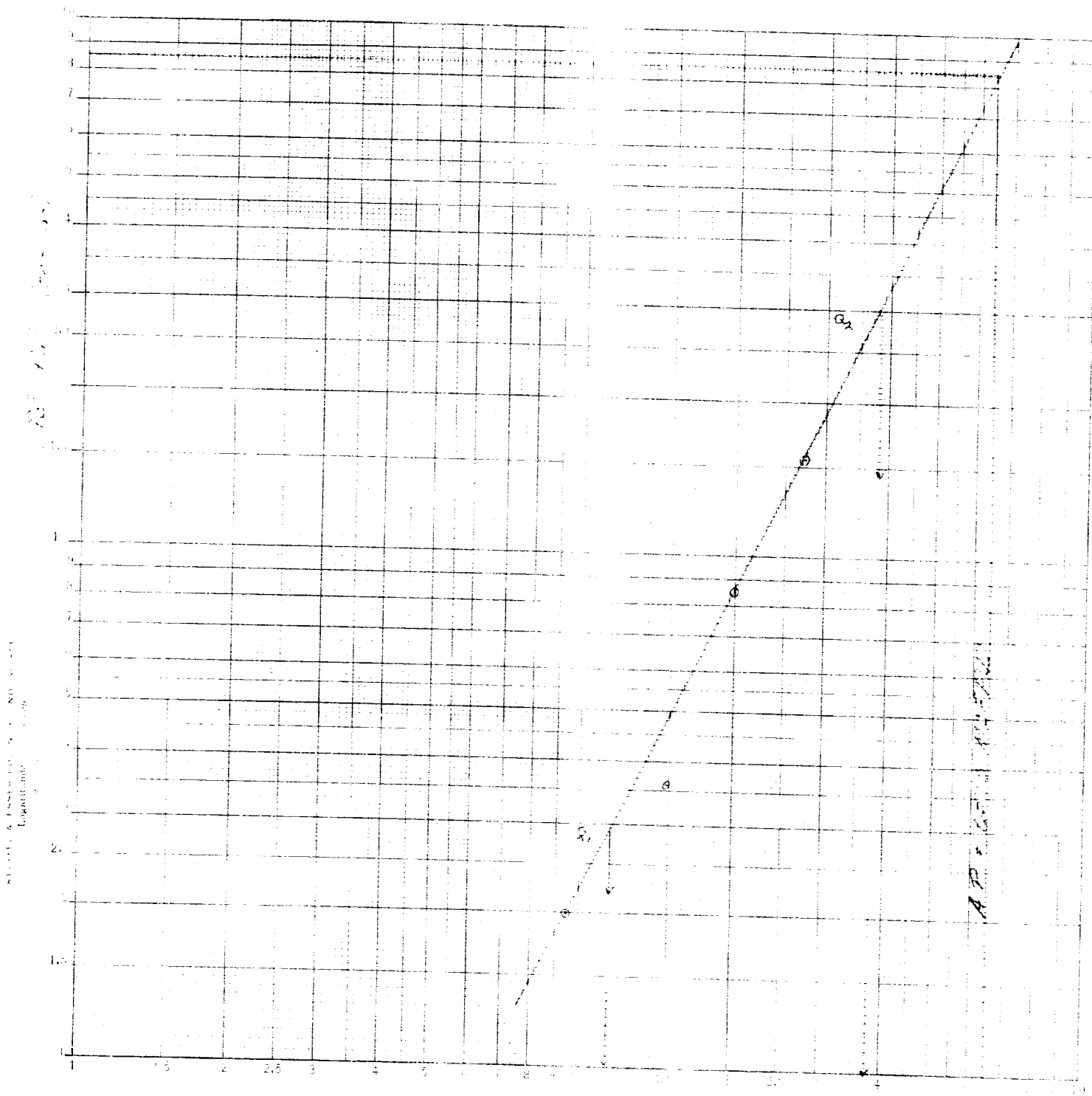
The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

- Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.
- P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia
- P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if
flowing through casing.) psia
- P_f = Meter pressure, psia.
- h_w = Differential meter pressure, inches water.
- F_g = Gravity correction factor.
- F_t = Flowing temperature correction factor.
- F_{pv} = Supercompressibility factor.
- n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .

Chas. S. Jones
Superintendent
Nashua, N. H.



0. 10. 10